

REMARKS

This Amendment is fully responsive to the final Office Action of October 29, 2010 and Advisory Action of February 22, 2011, issued in connection with the above-identified application. A request for continued examination (RCE) and a request for one-month extension of time are included. Claims 16, 18, 19, 21 and 22 are pending in the present application. With this Amendment, claim 16 is amended. No new matter has been introduced by the amendments made to claim 16. Favorable reconsideration is respectfully requested.

I. Interview Summary

The Applicants thank Examiner Howard for granting the telephone interview (hereafter “Interview”) with the Applicants’ representative, which was conducted on January 31, 2011.

During the interview, the detailed features of the camera shake detection unit and the camera shake correction unit recited in independent claim 16 were discussed. Additionally, the motivation behind combining Kiyooki (Japanese Publication No. 2002/328428, hereafter “Kiyooki”) and Pate (U.S. Patent No. 7,187,343, hereafter “Pate”) was discussed.

The Examiner indicated that he is relying on Kiyooki for disclosing or suggesting the general concept of camera shake detection and correction, and is relying on Pate for disclosing or suggesting correction based on detection at four corners of an image.

However, it was noted that Kiyooki appears to disclose or suggest merely detecting a speckle pattern of a reflected laser beam and therefore does not actually detect an image captured by a camera (see e.g., ¶[0033]). Additionally, Pate discloses color correction, not camera shake correction. Therefore, the combination still does not appear to disclose or suggest all the features of the claimed camera shake detection unit and the camera shake correction unit recited in independent claim 16.

At the conclusion of the Interview, no agreement was reached.

II. Prior Art Rejections

In the final Office Action, claims 16 and 22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimada et al. (U.S. Patent No. 6,670,603, hereafter “Shimada”) in view of Kiyooki (Japanese Publication No. 2002-328428, hereafter “Kiyooki”), and further in view of Pate (U.S. Patent No. 7,187,343, hereafter “Pate”).

The Applicants have amended independent claim 16 to more clearly distinguish the present invention from the cited prior art. The Applicants assert that the above cited prior art

fails to disclose or suggest at least the features now recited in independent claim 16 (as amended). Independent claim 16 recites *inter alia* the following features:

“[a] portable video projector for projecting video, comprising:...

a camera shake detection unit which detects an amount of camera shake of the portable video projector while being held by a user..., and

wherein said camera shake correction unit performs correction of the camera shake so that projecting positions of the laser lights of three colors including red, blue and green are not deviated when the video is projected, and said camera shake detection unit detects the camera shake amount by detecting movement of a video at four corners of an image that is captured by said camera device.” (Emphasis added).

The features emphasized above in independent claim 16 are fully supported by the Applicants’ disclosure (see e.g., pg. 28, lines 15-18). The present invention (as recited in independent claim 16) is distinguishable from the cited prior art in that a camera shake correction unit performs correction of the camera shake while a portable video projector is being held by a user so that projecting positions of the laser lights including three colors of red, blue and green are not deviated when a video is projected. Additionally, the camera shake detection unit detects the camera shake amount by detecting the movement of a video at four corners of an image that is captured by the camera device of the video projector.

In the Office Action, although the Examiner relies on the combination of Shimada, Kiyooki and Pate for disclosing or suggesting all the features of independent claim 16, the Examiner relies primarily on the combination of Kiyooki and Pate for disclosing or suggesting the feature of “the camera shake detection unit” and “camera shake correction unit” recited in independent claim 16.

As noted during the interview, the Examiner indicated that he is relying on Kiyooki for disclosing or suggesting the general concept of camera shake detection and correction, and is relying on Pate for disclosing or suggesting correction based on detection at four corners of an image.

However, the Applicants assert that one of ordinary skill in the art would not be motivated to combine the references and, even if combined, the combination fails to disclose or suggest all the features of independent claim 16.

In the Office Action, the Examiner relies on Kiyoaki in ¶[0033]; and Pate in col. 2, lines 2-3; col. 4, line 63; and col. 6, lines 6-7 and lines 17-22.

Kiyoaki in ¶[0033] discloses or suggests detecting a speckle pattern of a reflected laser beam and therefore does not actually detect an image captured by a camera (see e.g., ¶[0033]).

Pate in col. 2, lines 2-3; col. 4, line 63; and col. 6, lines 6-7 and lines 17-22 discloses a front-projection display system that includes a projector or display device adapted to produce a principal image and a calibration image on a display or viewing surface. As described in Pate, the principal image may be an image of any nature and displayed on the display surface in its intended form, such as with reasonable colors. The calibration image is an image with a known characteristic and is used to provide feedback to the display system for use in modifying the projection of a principal image for improving the corresponding characteristics (i.e., colors) of the principal image. Additionally, as seen in Fig. 1, the display device (i.e., projector) appears to be stationary (i.e., not meant to be held).

The object of Pate is not to correct the camera shake amount but to compensate or calibrate color characteristics. In fact, nothing in Pate discloses or suggests that the display system illustrated in Fig. 1 can detect a camera shake amount, and given that the display device (i.e., projector) appears to be stationary (i.e., not meant to be held), the issue of camera shake while being held by a user is not even considered by the teachings of the reference.

Conversely, independent claim 16 recites:

“a camera shake detection unit which detects an amount of camera shake of the portable video projector while being held by a user..., and

wherein said camera shake correction unit performs correction of the camera shake so that projecting positions of the laser lights of three colors including red, blue and green are not deviated when the video is projected, and said camera shake detection unit detects the camera shake amount by detecting movement of a video at four corners of an image that is captured by said camera device.”

The present invention (as recited in independent claim 16) performs correction of the camera shake while a portable video projector is being held by a user so that projecting positions of the laser lights including three colors of red, blue and green are not deviated when a video is projected. Additionally, the camera shake detection unit detects the camera shake amount by

detecting the movement of a video at four corners of an image that is captured by the camera device of the video projector.

As noted above, Kiyooki discloses or suggests merely detecting a speckle pattern of a reflected laser beam and therefore does not actually detect an image captured by a camera (see i.e., ¶[0033]); and Pate (i.e., col. 2, lines 2-3; col. 4, line 63; and col. 6, lines 6-7 and lines 17-22) discloses color correction, not camera shake correction.

Accordingly, one of ordinary skill in the art would not be motivated to combine the speckle pattern detection taught by Kiyooki with the compensation or calibration of color characteristics taught by Pate in an attempt to arrive at the features of the camera shake detection and correction units of present invention (as recited in independent claim 16).

Also, based on the deficiencies noted above in Kiyooki and Pate, even if the combination of the references (i.e., as suggested by the Examiner) was made, the combination fails to disclose or suggest all the features of the camera shake detection and correction units of the present invention (as recited in independent claim 16).

Finally, modifying or combining and Kiyooki and Pate to include all the features of independent claim 16 would be based on improper hindsight reasoning. That is, “but for” the Applicants’ invention (as recited in independent claim 16), there is no suggestion or motivation in the prior art to include all the features of the camera shake detection and corrections units of the present invention (as recited in independent claim 16).

Based on the above discussion, no combination of Shimada Kiyooki and Pate would result in, or otherwise render obvious, all the features of independent claim 16. Likewise, no combination of Shimada Kiyooki and Pate would result in, or otherwise render obvious, claim 22 at least by virtue of its dependency from independent claim 16.

In the Office Action, claims 18, 19 and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimada in view of Pate and Kiyooki, and further in view of Tanaka (U.S. Patent No. 5,479,236, hereafter “Tanaka”).

Claims 18, 19 and 21 depend (directly or indirectly) from independent claim 16. As noted above, Shimada, Kiyooki and Pate fail to disclose or suggest all the features now recited in independent claim 16 (as amended). Additionally, Tanaka fails to overcome the deficiencies noted above in Shimada, Kiyooki and Pate. Accordingly, no combination of Shimada, Kiyooki

and Pate with Tanaka would result in, or otherwise render obvious, claims 18, 19 and 21 at least by virtue of their dependencies from independent claim 16.

In light of the above, the Applicants submit that all the pending claims are patentable over the prior art of record. The Applicants respectfully request that the Examiner withdraw the rejections presented in the outstanding Office Action, and pass the present application to issue. The Examiner is requested to contact the undersigned attorney by telephone to resolve any issues remaining in the application.

III. Conclusion

In light of the above, the Applicants submit that all the claims pending in the present application are patentable over the prior art of record. Accordingly, the Applicants respectfully request that the Examiner withdraw the rejection in the Office Action and pass the present application to issue. The Examiner is invited to contact the undersign attorney by telephone to resolve any issues remaining in the application.

Respectfully submitted,

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